

EMPIRE MOBILE HOME PARK (PWS 2290012) SOURCE WATER ASSESSMENT OPERATOR FINAL REPORT

October 9, 2001



State of Idaho Department of Environmental Quality

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the wells and aquifer characteristics.

This report, *Source Water Assessment for Empire Mobile Home Park, Latah County, Idaho*, describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The Empire Mobile Home Park drinking water system consists of three ground water sources referred to as the North, East and Old Wells. All three wells have an overall high susceptibility risk rating for microbial contamination due to numerous detections of bacteria in composite water samples. Since the composite samples cannot be linked to any particular well, the source of contamination could be from any one of the wells or from the delivery system down stream of the wells. The North Well has an overall low susceptibility risk rating for the other three categories covered in this report including inorganic contaminants like metals and nitrate (IOC), volatile organic contaminants like petroleum products (VOC) and synthetic organic contaminants like pesticides and herbicides (SOC). The East Well and Old Well have moderate risk ratings for those three categories.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For the Empire Mobile Home Park, source water protection activities should focus on implementation of best management practices aimed at protecting the wellheads and surface seals within the zone immediate to the wells. An emphasis should be made to track down the source of bacterial contamination and eliminating it. Practices aimed at reducing the leaching of agricultural chemicals should be implemented. Disinfection practices should be continued since microbial contamination is a real concern at Empire Mobile Home Park. Most of the source water protection designated areas are outside the direct jurisdiction of the Empire Mobile Home Park. Partnerships with state and local agencies should be established and are critical to success. Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the local Soil and Water Conservation District, and the Natural Resources Conservation Service.

A community with a fully developed source water protection program will incorporate many strategies. For assistance in developing protection strategies please contact the Lewiston Regional Office of the Idaho Department of Environmental Quality or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR EMPIRE MOBILE HOME PARK, LATAH COUNTY, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings used to develop the assessment also is attached.

Background

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area and sensitivity factors associated with the wells and aquifer characteristics.

Level of Accuracy and Purpose of the Assessment

Since there are over 2,900 public water sources in Idaho, there is limited time and resources to accomplish the assessments. All assessments must be completed by May of 2003. An in-depth, site-specific investigation of each significant potential source of contamination is not possible. **Therefore, this assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The Idaho Department of Environmental Quality (DEQ) recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

The Empire Mobile Home Park water system comprised of three community wells, serves 25 connections. The wells are located within the mobile home park in Latah County, less than one mile north of Moscow's City limits and ¼ mile east of Highway 95 (Figure 1).

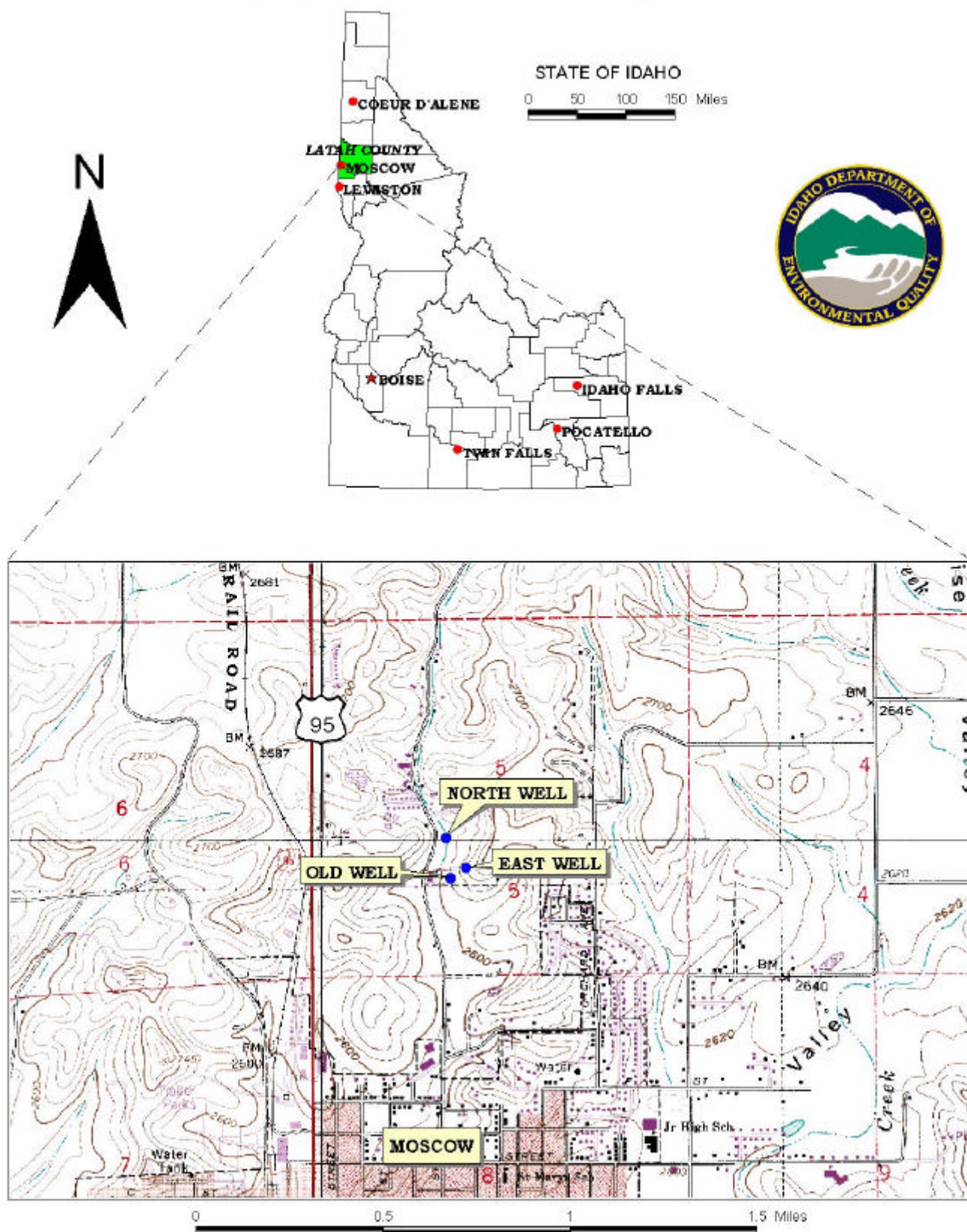
Total coliform bacteria and fecal coliform bacteria that was detected in the distribution system in 1992, 1994, 1995 and 2000 cannot be linked to a particular well since the samples were collected from composite water from all three wells. The inorganic contaminant (IOCs) sodium has been detected, but at levels below the Maximum Contaminant Level (MCL). No detections of volatile organic contaminants (VOCs) or synthetic organic contaminants (SOCs) have been recorded.

Defining the Zones of Contribution – Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time-of-travel (TOT) zones (zones indicating the number of years necessary for a particle of water to reach a well) for water in the aquifer. DEQ used a refined computer model approved by the EPA in determining the 3-year (Zone 1B), 6-year (Zone 2), and 10-year (Zone 3) TOT for water associated with the Columbia River Basalt aquifer. The computer model used site specific data, assimilated by DEQ from a variety of sources including the Empire Mobile Home Park well logs, other local area well logs, and hydrogeologic reports summarized below.

The wells of the Empire Mobile Home Park are situated in the Moscow Basin and draw their water from the Wanapum Aquifer. Most private wells in this area pump from this shallow aquifer. The Wanapum Aquifer is within the sedimentary rocks of the Wanapum Formation of the Columbia River Basalt and the Vantage Member of the Latah Formation. These units combine to form a stratigraphic section of between 200 and 250 feet of basalt and a 300-feet thick sequence of sands and silts. The Columbia River basalts are dense, exhibit columnar jointing in many places, and are folded and faulted leading to many fracture zones where ground water may collect (Whitehead and Parlman, 1979). Basalt flows fracture at the surface as they cool. The fractures occur in the horizontal direction throughout the flow. Regional fractures hundreds or thousands of feet long may intersect several flows and have widely varying widths (Lum et al., 1990). Locally, multiple basalt flows underlie the site. Although regional ground water flow directions for the Wanapum Aquifer are from east to west towards the Snake River, in the vicinity of Empire Mobile Home Park aquifer conductivity is very high and flows from the north to the south. This flow pattern is illustrated in the long, narrow, north-south trending delineation zones shown in Figures 2,3 and 4. The actual data used by DEQ in determining the source water assessment delineation areas are available upon request.

FIGURE 1. Geographic Location of the Empire Mobile Home Park



Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and from available databases.

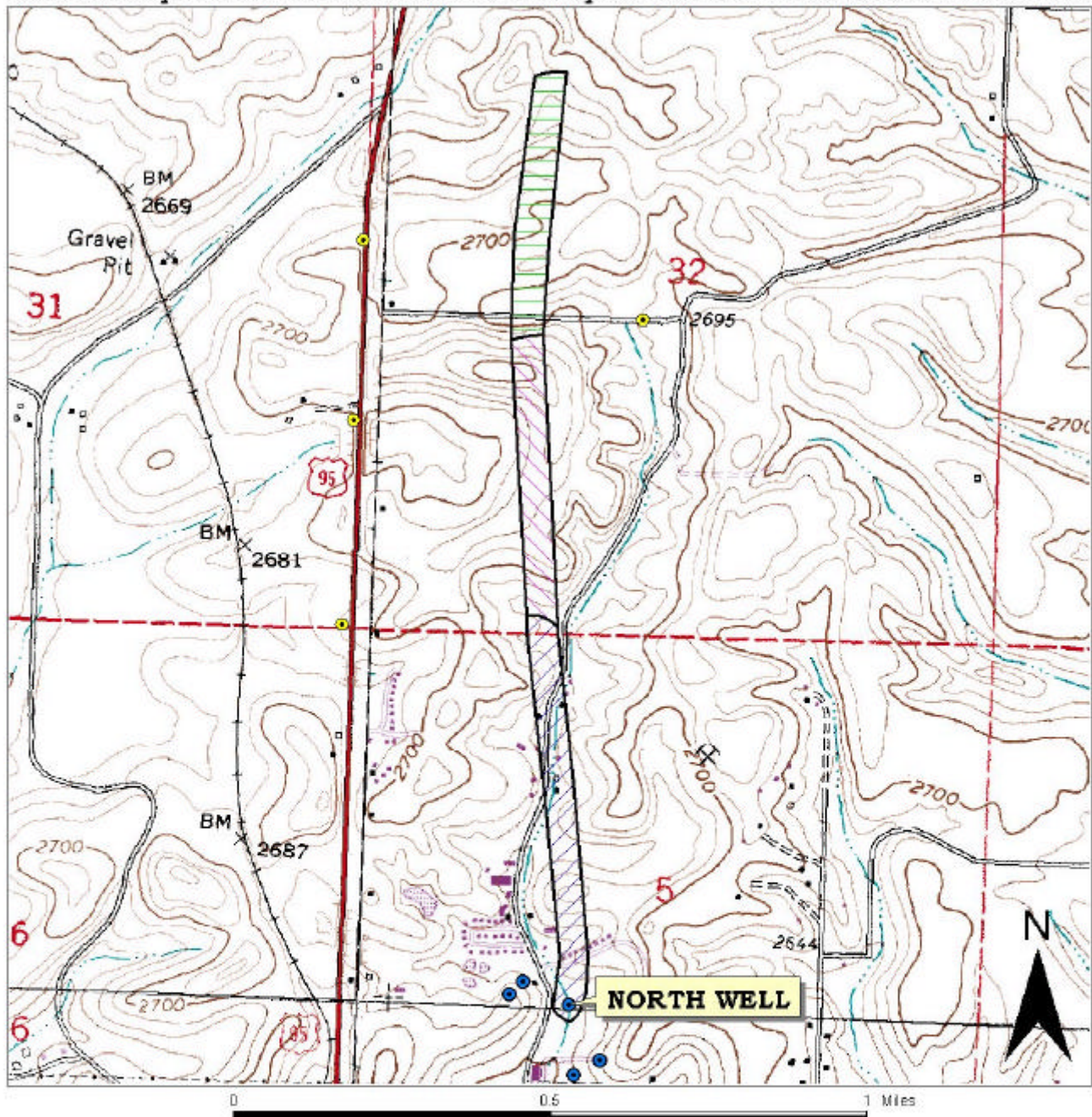
The dominant land use outside the Empire Mobile Home Park area is grazing land and irrigated cropland. Land use within the immediate area of the wellheads consists of the Mobile Home Park. Aside from the inherent threat of agriculturally related contamination, no other potential contaminant sources have been identified within the delineation zones for the three wells comprising the Empire Mobile Home Park water system. Potential ground water contamination from agriculture is described under “Potential Contaminant Source and Land Use” in Section 3 and in the land use scoring portion of Attachment A of this report.

Contaminant Source Inventory Process

A two-phased contaminant inventory of the study area was conducted in February 2001. The first phase involved identifying and documenting potential contaminant sources within the Empire Mobile Home Park Source Water Assessment Area through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ. The second, or enhanced, phase of the contaminant inventory involved contacting the operator to validate the sources identified in phase one and to add any additional potential sources in the area.

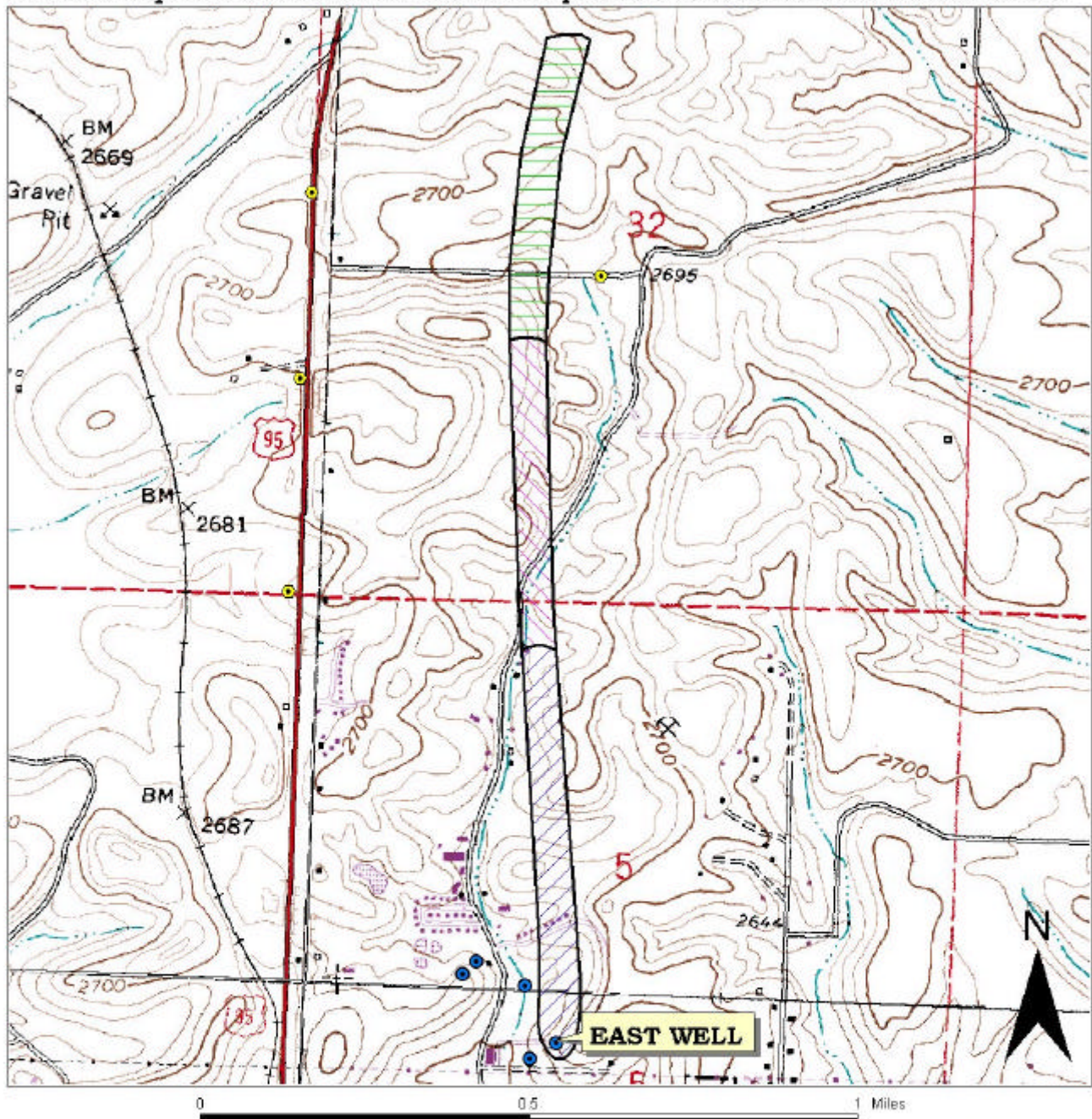
In the case of the Empire Mobile Home Park, no specific potential contaminant sources were found. Figures 2, 3 and 4 show the locations of the wells along with the delineation zones extending in broad narrow bands to the north beneath cultivated farmland.

FIGURE 2. Empire Mobile Home Park Delineation Map and Potential Contaminant Source Locations



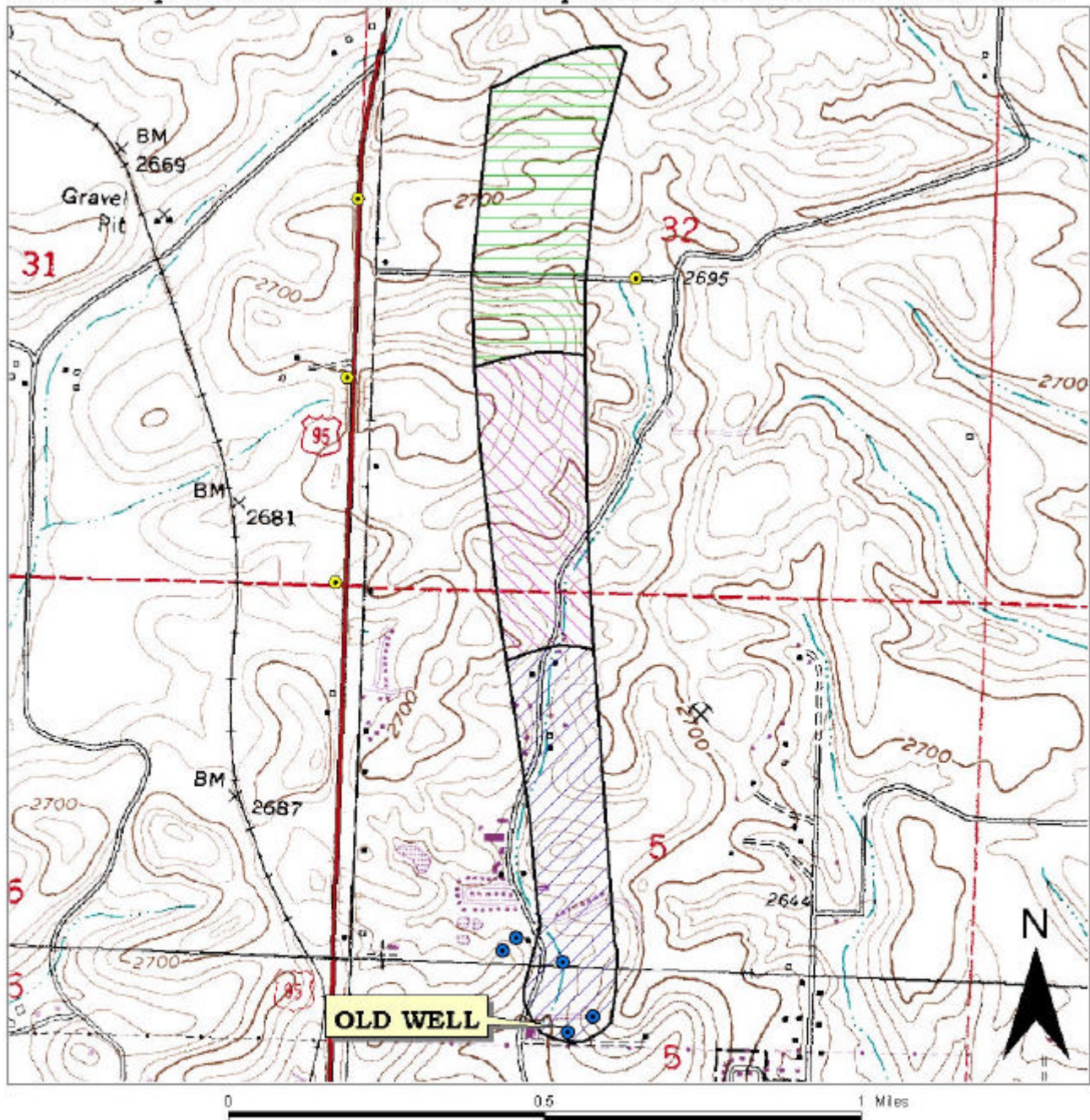
PWS# 2290012
NORTH WELL

FIGURE 3. Empire Mobile Home Park Delineation Map and Potential Contaminant Source Locations



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EAST WELL

FIGURE 4. Empire Mobile Home Park Delineation Map and Potential Contaminant Source Locations



PWS# 2290012
OLD WELL

Section 3. Susceptibility Analyses

The water system's susceptibility to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking.

Hydrologic Sensitivity

Hydrologic sensitivity is low for the North Well and moderate for the East Well and Old Well (Table 1). This reflects the nature of the soils being in the poorly drained to moderately drained class, the vadose zone (zone from land surface to the water table) being made predominantly of relatively low permeability clay. Additionally, the wells have laterally extensive low permeability units that could retard downward movement of contaminants. The higher hydrologic sensitivity for the North and Old Wells is due to well log information indicating that those wells intercepted water closer to surface than the East Well.

Well Construction

Well construction directly affects the ability of the well to protect the aquifer from contaminants. The Empire Mobile Home Park drinking water system consists of three wells that extract ground water for residential uses. The well system construction scores are in the medium risk range for the North and East Wells and high for the Old Well. The high risk rating for the Old Well is due to limited well log information available for this well and the shallowness of the well at just 131 feet deep. Sketchy information on the driller's log for the Old Well indicates that the hole was collared in "decomposed granite" which usually is very permeable and does not form a good seal.

Potential Contaminant Sources and Land Use

Irrigated Cropland covers over half of the delineation zones for the East Well and Old Well and less than half of the delineation zone for the North Well. This proportional agricultural land use is reflected in the land use section of Attachment A, Section 3. The relative amount of cropland within the delineation zones for each well accounts for the overall IOC, VOC and SOC lower risk rating in the land use part of the scoring for the North Well compared to the East Well and Old Well.

Final Susceptibility Ranking

All three wells have an overall high susceptibility risk rating for microbial contamination due to numerous detections of bacteria in composite water samples. Since the composite samples cannot be linked to any particular well, the source of contamination could be from any one of the wells or from the delivery system down stream of the wells. The North Well has an overall low susceptibility risk rating for the other three categories covered in this report including IOCs like metals and nitrate, like VOCs like petroleum products and SOCs like pesticides and herbicides. The East Well and Old Well have moderate risk ratings for those three categories (Table 2).

Table 1. Summary of Empire Mobile Home Park Susceptibility Evaluation

Well	Susceptibility Scores ¹									
	Hydrologic Sensitivity	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
North Well	L	L	L	L	H	M	L	L	L	H
East Well	M	M	M	M	H	M	M	M	M	H
Old Well	M	M	M	M	H	H	M	M	M	H

¹H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility,

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. For the Empire Mobile Home Park, the source of microbial contamination should be located and dealt with. Source water protection activities should focus on implementation of best management practices aimed at protecting the wellheads and surface seals within the zone immediate to the wells. Residential runoff should be monitored. Practices aimed at reducing the leaching of agricultural chemicals should be implemented. Disinfection practices should be continued as microbial contamination is a concern. Some of the designated source water protection areas are outside the direct jurisdiction of the Empire Mobile Home Park. Partnerships with state and local agencies should be established and are critical to success. Continued vigilance in keeping the well protected from surface flooding can also keep the potential for contamination reduced. Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the local Soil and Water Conservation District, and the Natural Resources Conservation Service.

Assistance

Public water supplies and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

Lewiston Regional DEQ Office (208) 799-4370

State DEQ Office (208) 373-0502

Website: <http://www2.state.id.us/deq>

Water suppliers serving fewer than 10,000 persons may contact John Bokor, Idaho Rural Water Association, at (208) 743-6142 for assistance with wellhead protection strategies.

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.

References Cited

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Attachment A

Empire Mobile Home Park Susceptibility Analysis Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

0 - 5 Low Susceptibility

6 - 12 Moderate Susceptibility

≥ 13 High Susceptibility

1. System Construction

Drill Date	9/15/88		
Driller Log Available	YES		
Sanitary Survey (if yes, indicate date of last survey)	NO	0	
Well meets IDWR construction standards	NO	1	
Wellhead and surface seal maintained	NO	1	
Casing and annular seal extend to low permeability unit	YES	0	
Highest production 100 feet below static water level	YES	0	
Well located outside the 100 year flood plain	NO	1	
Total System Construction Score		3	

2. Hydrologic Sensitivity

Soils are poorly to moderately drained	YES	0	
Vadose zone composed of gravel, fractured rock or unknown	NO	0	
Depth to first water > 300 feet	YES	0	
Aquitard present with > 50 feet cumulative thickness	YES	0	
Total Hydrologic Score		0	

3. Potential Contaminant / Land Use - ZONE 1A

	IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	1	1	1	1
Farm chemical use high	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A	3	1	3	1

Potential Contaminant / Land Use - ZONE 1B

Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B 25 to 50% Non-Irrigated Agricultural Land	1	1	1	1	
Total Potential Contaminant Source / Land Use Score - Zone 1B	1	1	1	1	

Potential Contaminant / Land Use - ZONE II

Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Land Use Zone II Greater Than 50% Non-Irrigated Agricultural	1	1	1		
Potential Contaminant Source / Land Use Score - Zone II	1	1	1	0	

Potential Contaminant / Land Use - ZONE III

Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III	0	0	0	0	
Cumulative Potential Contaminant / Land Use Score	5	3	5	2	

4. Final Susceptibility Source Score

4 4 4 4

5. Final Well Ranking

Low Low Low High

1. System Construction

SCORE

Drill Date	3/13/01	
Driller Log Available	YES	
Sanitary Survey (if yes, indicate date of last survey)	NO	0
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	NO	1
Casing and annular seal extend to low permeability unit	YES	0
Highest production 100 feet below static water level	YES	0
Well located outside the 100 year flood plain	NO	1
Total System Construction Score		3

2. Hydrologic Sensitivity

Soils are poorly to moderately drained	YES	0
Vadose zone composed of gravel, fractured rock or unknown	YES	1
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	YES	0
Total Hydrologic Score		2

3. Potential Contaminant / Land Use - ZONE 1A

IOC Score VOC Score SOC Score Microbial Score

Land Use Zone 1A	DRYLAND AGRICULTURE	1	1	1	1
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A		3	1	3	1

Potential Contaminant / Land Use - ZONE 1B

Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Greater Than 50% Non-Irrigated Agricultural	2	2	2	2
Total Potential Contaminant Source / Land Use Score - Zone 1B		2	2	2	2

Potential Contaminant / Land Use - ZONE II

Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Land Use Zone II	Greater Than 50% Non-Irrigated Agricultural	1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		1	1	1	0

Potential Contaminant / Land Use - ZONE III

Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		0	0	0	0
Cumulative Potential Contaminant / Land Use Score		6	4	6	3

4. Final Susceptibility Source Score

6 6 6 6

5. Final Well Ranking

Moderate Moderate Moderate High

1. System Construction

SCORE

Drill Date	5/23/76	
Driller Log Available	YES	
Sanitary Survey (if yes, indicate date of last survey)	NO	0
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	NO	1
Casing and annular seal extend to low permeability unit	NO	2
Highest production 100 feet below static water level	NO	1
Well located outside the 100 year flood plain	YES	0

Total System Construction Score 5

2. Hydrologic Sensitivity

Soils are poorly to moderately drained	YES	0
Vadose zone composed of gravel, fractured rock or unknown	NO	0
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2

Total Hydrologic Score 3

3. Potential Contaminant / Land Use - ZONE 1A

IOC Score VOC Score SOC Score Microbial Score

Land Use Zone 1A	DRYLAND AGRICULTURE	1	1	1	1
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A		3	1	3	1

Potential Contaminant / Land Use - ZONE 1B

Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B Greater Than 50% Non-Irrigated Agricultural		2	2	2	2

Total Potential Contaminant Source / Land Use Score - Zone 1B 2 2 2 2

Potential Contaminant / Land Use - ZONE II

Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Land Use Zone II Greater Than 50% Non-Irrigated Agricultural		1	1	1	

Potential Contaminant Source / Land Use Score - Zone II 1 1 1 0

Potential Contaminant / Land Use - ZONE III

Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0	

Total Potential Contaminant Source / Land Use Score - Zone III 0 0 0 0

Cumulative Potential Contaminant / Land Use Score

6 4 6 3

4. Final Susceptibility Source Score

9 9 9 9

5. Final Well Ranking

Moderate Moderate Moderate High